



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,797	11/24/2003	Hirohisa Yamada	36856.1174	3451
54066	7590	10/17/2005		
KEATING & BENNETT, LLP 8180 GREENSBORO DRIVE SUITE 850 MCLEAN, VA 22102			EXAMINER LAU, TUNG S	
			ART UNIT 2863	PAPER NUMBER

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

**Office Action Summary**

Application No.

10/718,797

Applicant(s)

YAMADA ET AL.

Examiner

Tung S. Lau

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                        |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>See office action</u> | 6) <input type="checkbox"/> Other: _____   |

## **DETAILED ACTION**

### **Information Disclosure Statement**

1. Information Disclosure Statement filed on 12/22/2004 and 05/03/2004 are acknowledged by the examiner; A copy of a signed PTO-1449 attached with this office action.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Peled at al. (U.S. Patent 4,725,784).

Regarding claim 5:

Peled discloses a calculation apparatus for calculating effective power relating to a capacitor, comprising a calculator, wherein the calculator stores data on a plurality of capacitors including capacitances and dielectric tangents thereof which are determined based on a voltage characteristic (abstract), a frequency characteristic (Col. 6-7, Lines 65-8), and a temperature characteristic of the capacitors (Col. 1, Lines 40-59), and data on a first effective power for each of a plurality of equilibrium temperatures of the capacitors, when a predetermined capacitance required for an electric circuit using one of the capacitors and the

waveform of a periodic voltage applied to both ends of the capacitor are input (Col. 1-2, Lines 60-16), a second effective power at each of a plurality of provisional temperatures is calculated from the input waveform of the periodic voltage (Col. 2, Lines 3-33); the calculator determines a predetermined temperature at which the first effective power is approximately equal to the second effective power as a target equilibrium temperature of the capacitor (Col. 2, Lines 3-32), the calculator determines the first effective power and the second effective power corresponding to the target equilibrium temperature as a target effective power corresponding to the periodic voltage (fig. 4), and the calculator compares a stored allowable power of the capacitor with the target effective power corresponding to the periodic voltage in order to determine whether or not the capacitor is available (fig. 2, 3, 7).

Regarding claim 6:

Peled discloses a recording medium storing a program for calculating effective power relating to a capacitor by using a computer, wherein the program stores data on a plurality of capacitors including capacitances and dielectric tangents thereof which are determined based on a voltage characteristic (abstract), a frequency characteristic (Col. 6-7, Lines 65-8), and a temperature characteristic of the capacitors (Col. 1, Lines 4-59), and data on a first effective power for each of a plurality of equilibrium temperatures of the capacitors (fig. 4), wherein when a predetermined capacitance required for an electric circuit using one of the

capacitors and the waveform of a periodic voltage applied to both ends of the capacitor are input (Col. 1-2, Lines 60-17), the program calculates a second effective power at each of a plurality of provisional temperatures from the input waveform of the periodic voltage (Col. 1-2, Lines 40-17, fig. 4, 2, 3), wherein the program determines a predetermined temperature at which the first effective power is approximately equal to the second effective power as a target equilibrium temperature of the capacitor (fig. 4), wherein the program determines the first effective power and the second effective power corresponding to the target equilibrium temperature as a target effective power corresponding to the periodic voltage (fig. 4), wherein the program compares a stored allowable power of the capacitor with the target effective power corresponding to the periodic voltage in order to determine whether or not the capacitor is available (fig. 2, 3, 7).

***Allowable Subject Matter***

3. Claims 1-4 are allowed.

***Reasons for Allowance***

4. The following is an examiner's statement of reasons for allowance:

Independent claims 1 and 4 contain allowable subject matter. None of the prior art of record shows or fairly suggests the claimed invention.

Regarding claims 1 and 4:

Art Unit: 2863

The primary reason for the allowance of claims 1 and 4 are the inclusion of the method steps of calculating effective power relating to a capacitor including

$$P_e = \frac{\tan \delta}{1 + (\tan \delta)^2} \cdot \pi f C b^2$$

Pe : effective power  
tan δ : dielectric tangent  
C : capacitance  
f : frequency  
b : sine-wave amplitude

It is these features found in the claim, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes this claim allowable over the prior art.

Claims 2-3 are allowed due to their dependency on claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

5. Applicant's arguments filed 09/26/2005 have been fully considered but they are not persuasive.

**A.** Applicant argues in the arguments that the examiner use the term 'capacitor' too broad. The examiner reminds to the applicants that during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). While the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). Battery meet the requirement define in Encarta online dictionary (an electrical component used to store a charge temporarily, consisting of two conducting surface separated by a nonconductor dielectric).

**B.** Applicant continues to argue in the arguments applicant capacitor really means on page 9 of the specification which is a ceramic capacitor has the value of 470pf. The examiner reminds the applicant although the claims are interpreted

in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

C. Applicant continues to argue in the arguments that the applicant 'capacitance or dielectric tangents is not a battery. Reminds to the applicants that during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). While the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

D. Applicant continues to argue in the arguments that the prior art fail to disclose 'capacitances and dielectric tangents thereof which are determined based on a voltage characteristic, a frequency characteristic and temperature characteristic of the capacitor'. Peled discloses 'capacitances and dielectric tangents thereof which are determined based on a voltage characteristic, a frequency characteristic and temperature characteristic of the capacitor' in Col. 6-7, Lines



65-8 and Col. 1, Lines 4-59. The applicant argue that the battery operate with zero frequency and is not frequency dependent, the examiner disagree, even if the battery is operating with zero frequency, still meet the claim 'capacitance based on frequency characteristic'.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

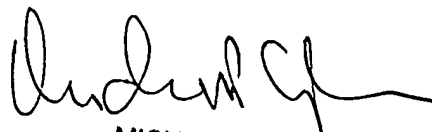
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Art Unit: 2863

John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TL



MICHAEL NGHIEM  
PRIMARY EXAMINER